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COVER: Native of Europe, now widely distributed as an introduced species, the brown trout is a favorite of many anglers because by reputation he is shy, wary, and hard to fool; but our records show that when streams are high and muddy the brown is easier to take than either the brook or rainbow. Our artist: Duane Raver, Cary, North Carolina.

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Spring is for Gobblers

LOVETT WILLIAMS, Game Management Division
Florida Game and Fresh Water Fish Commission
From "Spring Is For Gobblers," *Florida Wildlife*
February, 1967

MOST hunters overestimate the wild turkey's intelligence. The turkey is quick as lightning, tough as nails, and sometimes as scarce as hen's teeth. But he's not very smart—he just gets scared easily.

In the fall when the deer hounds start yowling, squirrel guns start popping, and there's a hunter beside every tree, old gobblers get *real* scared and stay scared all winter. They have little else to do than get through the season with a whole skin. But, with a few days in March, after the hunters have all gone home and the woods start greening up, a gobbler's mind turns to other things, namely to hen turkeys. He's the same shy old turkey, but much easier to hunt. The reason: he doesn't stay scared long. So, if you're having trouble taking home a trophy gobbler, try him in the spring.

Calling Techniques

The turkey's gobbling serves two functions, to summon his harem of hens for mating, and to advertise his presence on his territory.

During most of the fall and winter seasons turkeys seldom respond to even the most perfectly executed turkey voice imitations (or even other *real* turkeys) except when they are separated from their flocks. In the fall old gobblers are hard to call up under any circumstances. Spring calling is another matter; the flocks do not need to be scattered for successful spring calling and old gobblers will readily investigate turkey sounds in the vicinity.

Except in spring, the adult gobbler takes little interest in associating with turkeys other than a few old bachelors like himself, and pays little attention to the yelping of turkeys or turkey hunters. But in the spring he becomes more social minded, will answer the calls of other turkeys, and can be rather easily called within gun-range.

Most turkey hunters already know how to call spring gobblers, without fully realizing it. The most often imitated turkey sound is the plain four or five syllable yelp of the adult hen. Though expert fall season turkey callers may use a large vocabulary from whistling to squawking, the spring gobbler hunter can get by very nicely with only the simple short hen yelp which can be heard everyday in the barnyard.

Virginia's 1968 spring gobbler season opens April 22, closes May 11. For open counties see page 13.

LETTERS

Surprise

IN response to your editorial concerning wood ducks, I went down to clean out our nesting box and found, much to my surprise, a small, very lethargic screech owl who had made his winter home there. We looked at each other very carefully and I decided not to disturb this winter occupant and replaced the top. I hope he will stop using the box in time to make way for a wood duck next month.

J. Carr Dorman
Charlottesville

Wildlife Hazards

I THOUGHT perhaps the following might be of interest to readers of *Virginia Wildlife.*

From my home in Prince Edward County to Charlotte Court House, where I work with the Soil Conservation Service, I have to drive approximately ten miles on secondary roads five days a week.

Seeing quite a lot of game killed by automobiles, I decided at the beginning of 1967 to count dead birds and animals for one full year and this is the count I got:

Rabbits—40
Opossums—9
Squirrels—9
Foxes—2
Groundhogs—2
Quail—2

Garland Clark
Keysville

WHILE bird hunting in Buckingham County I came across this doe deer caught in a perfect trap; she had just died. Thought maybe your readers might like to see.

Kenneth P. Bryant
Buckingham

Our Fault

I READ "Purple Martins—Nature's Insecticide" on page 19 of the February *Virginia Wildlife*, and I got interested in building a martin house but the directions don't make sense. If the apartments should be six cubic inches in size, that's about two inches on each side, isn't it? Now how do you put a two-and-a-half inch opening in a two-inch side, pray tell?

Confused
Richmond

Dear Confused: So are we. Actually the apartment size should have been given as a six inch cube (six inches on a side) rather than six cubic inches. Sorry about that.—Ed.

Birds of the Eastern Shore

By HEATHCOTE KIMBALL
Melfa

Photographs by Heathcote and Sabra Kimball

Eastern Shore bird life will be an extra attraction during Historic Garden Week which will be observed on the Shore April 25 and 26, from 10 a.m. to 5 p.m. each day. Information centers will be at The America House, Cape Charles, and The Whispering Pines Motel, Accomac. Many beautiful old town and country homes and gardens will be open, including Eyre Hall, Cessford, Oak Grove, Corbin Hall, Mount Wharton, West View, Deep Creek Plantation, Cokesbury, Hopkins Wharf Museum, Gulf Stream House and Garden, and Warwick.

THE tourist passing through the Eastern Shore of Virginia generally confines his sight-seeing to the North-South Route 13 and the Chesapeake Bay Bridge Tunnel. Probably the conception is one of a flat road bordered by large farms and interspersed with gas stations, motels and small restaurants with an occasional vista of small towns in the distance. However, if the tourist will detour either east or west, he will be well rewarded.

One of the best times to explore the many side roads is during Garden Week when some of the unique and charming homes in Northampton and Accomack Counties are open to the general public, with well marked ways to get to these places. Many are "down on the necks" which is the terminology applied to the points of land jutting out into the numerous creeks, both on the ocean or "seaside" to the east, and the Chesapeake "bayside" to the west. In the early days of the Shore, commerce was only by water, and numerous houses were built and furnished with materials sailed up the creeks to the proposed doorstep. Some, even now, have complete sets of Chinese export china sailed from China right to their own creek. Land was cleared for farming and the immediate vicinity of the houses was planted into beautiful gardens with emphasis on roses, camellias, boxwood, azaleas, crape myrtle and daffodils. Edging the farmland are great areas of woods profuse with loblolly pines interspersed with various kinds of hardwood. All of this makes for ideal bird habitat. Of interest also is the fact that Indians camped along the creek banks and artifacts, which include trading beads, arrow and spear heads and pottery, can be found along these banks washed out by storms or unusual high tides. This type of terrain, being both terrestrial and aquatic, is quite a paradise for the bird watcher, who in a confined area (the peninsula is only 12 miles wide in its more southerly parts) can observe many species of both land and water birds.

A female towhee visits our feeding station at Melfa.

Since Garden Week is concomitant with some of the days of spring migration, the garden visitor may be rewarded by seeing more species than the more common resident birds such as the indigo bunting, cardinal, mockingbird, Carolina wren, ruby-throated hummingbird, chickadee, titmouse, song sparrow, red-bellied woodpecker, and bobwhite. Needless to say, for several weeks both in the spring and fall, these ranks are swelled by a changing population characteristic of that particular time of year with some staying on for several months. Sometimes after a severe winter storm, unusual visitors will be seen such as a dickcissel, evening grosbeak, or rusty blackbird, which will be attracted by the wintering junco, white-throated sparrows, song sparrows, woodpeckers and myrtle warblers, not to mention the hoards of blackbirds.

One of the highlights of all bird-watchers on the East Coast is to see the prothonotary warbler or, by a more common name, the golden swamp warbler. One of the several habitats of this brilliant deep yellow bird with blue-grey wings is along the swampy areas of the Pocomoke River, where it nests in abandoned woodpecker holes or crevices in tree stumps, and there is always the remote possibility of seeing the much rarer but dull colored Swainson's warbler.

In fall migration the mecca for land bird observation is the southern tip of the Delmarva Peninsula at Kiptopeke. On their way south the migrators funnel down the ever narrowing peninsula and suddenly are faced with seventeen miles of open water. This expanse causes them to hesitate before making the flight, and they concentrate in large numbers in the woods behind Tourinns Motel which is right at the old ferry terminal. On a good birding day, either the first or second day of a northwest wind, over five hundred birds have been caught in mist nets, banded and released by members of the Virginia Society of Ornithology, who are collaborators with the Fish and Wildlife Service. Their group stays from September 15 through October, and daily tends the nets from sunrise to dark. In this six weeks they have banded over 5,000 land birds of 72 species.

The other two bird habitats of the Delmarva Peninsula consist of the saltwater marshes and the barrier beach islands. In the past, these islands have been inaccessible to all but a chosen few, consisting mostly of watermen, some

A flock of oystercatchers wings over Metomkin Inlet.

sportsmen, and a small minority of private property owners. This is rapidly changing and now we have an automobile road, parking, and refreshment area on Assateague Island approached through Chincoteague. A large part of this is within the National Seashore Parks system with a resident manager, rangers and assistants, who are most courteous, obliging and cooperative. A wandering hardtop road of several miles winds through the woods, then across a large area of salt marshes with shoal water ponds, past Toms Cove noted for its oysters, and ending at a parking field on the sand beach. This beach extends over five miles. Eventually a road will be made behind the dunes, but now only four wheel drive cars are permitted to run this stretch which is populated only by surf casters and those bathers who prefer isolation. On each side of the road and in close proximity are "borrow ditches," or narrow canals, which are replete with water birds. This population varies with the seasons of the year, and never is there a time devoid of bird or animal life. The well popularized Chincoteague ponies graze on the salt meadows, and an occasional sitka deer may be seen. Nature trails present interesting walks and help in closer observation of the water birds, but much can be seen by auto progressing slowly along the road with no prohibitions about parking along the road for a few minutes. During spring migration of the shore birds this is a most strategic place to see at close range many varieties of snipe, plover, turnstones, etc., who feed along the banks of the canals and also on the adjacent mud flats and meadows.

While some birds may be seen on the sand beaches, the predominant bird life is in the wetlands. This is swelled to a vast extent in the fall when many varieties of ducks and several kinds of geese make this a stopping off place on their way south. Since the park managment plants various kinds of duck and geese food, many find this a most attractive place to winter.

One late winter day when conditions of wind and tide were just right, we took in two hours one hundred still pictures and several reels of movies of this concentration without getting out of the car. Among the birds photographed, not more than one hundred feet away, were three thousand snow geese in various plumages, some blue geese, one white-fronted goose (a rarity from the West), coot, and several species of ducks among which were shovellers, ruddy, pintail, gadwall, teal, mallards and black duck. Also present were many pied-billed grebes or "hell-divers" and several herons with the great blue the most common.

The other barrier islands are accessible only by boat. These are Cedar Island, seven miles long, and Parramore Island which has an active Coast Guard Station and a private hunting lodge as the only buildings. Further to the south are Hog and Cobb Islands. This last has been eroded from its past international reputation as one of the greatest hunting and fishing spots on the East Coast to a narrow four-mile sand strip. Because few humans visit these islands a profusion of water and shore birds such as herons, egrets, terns, skimmers, oystercatchers, clapper rail, willet, laughing gulls, and even the glossy ibis, a recent invader from farther south, nest both on the ground and in the low myrtle and groundsel bushes. One small area of high sandy marsh with low bushes, which extends for only several hundred feet, supports a rookery of over one thousand birds. Three or four nests can be found in one bush, and when the eggs have hatched all the bushes are teeming with crawling young. Upon approaching the rookery, being careful not to step on nests and eggs of willet, rail, and laughing gulls, there is

(Continued on page 14)

An osprey, or fish hawk, approaches its nest at Nassawadox Creek.

TROUT FOR 1968

By DIXIE L. SHUMATE, JR.
Supervising Trout Biologist

A RECORD number of trout are to be released in Virginia streams and impoundments during the 1968 trout fishing season. For stream fishermen the U. S. Forest Service has added Catawba Creek, Stony Run and Hypes Run in Botetourt County; Slate Lick Run in Rockingham County. In addition, Little River in Floyd County, Middle Fork Holston River in Smyth County and Valley Creek in Washington County have been added to state stocked streams.

The trout fishing season gets under way at NOON April 6, 1968, with 509,150 trout released prior to the opening date. A substantial increase will be made in number of brook trout released this year. In the past, hatchery conditions have been such that the raising of brook trout was uneconomical, but these conditions have been overcome.

The two "Pay-As-You-Go" fee fishing areas, Douthat State Park and Big Tumbling Creek, and the "fish-for-fun" areas of Rapidan River in Madison County and Cedar Creek in Russell County will open on the same date as the other streams and lakes throughout the state. During the closed in-season restocking period in May approximately 290,000 trout will be planted in all streams, with the remainder to be released in suitable streams later in the season. The practice of limited stocking of selected streams during the summer will be continued in areas where water conditions, such as temperature and flow, are adequate.

Smith Mountain Lake, Carvins Cove, South Holston Reservoir, Flannagan Reservoir, Philpott Reservoir and Gatewood Reservoir have been stocked with 116,000 6-inch to 7-inch rainbows, about 2% of which are the "golden" trout, a highly prized color variation of the rainbow. Except in South Holston Reservoir no special trout license is required to fish for trout in any of these impoundments, and the 3-day, $1.50 trip license will be honored for both residents and non-residents who do not have a regular state season license to fish. Smith Mountain Lake, Carvins Cove and Philpott Reservoir are open for trout fishing the year around. The daily creel limit in all impounded public waters is five trout.

A trout license in addition to a valid state fishing license is required to fish in designated stocked trout streams, where the daily limit is eight.

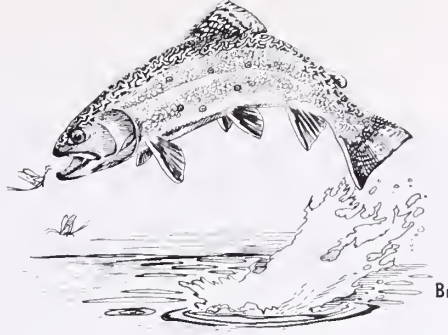
1968 Stocking Plan

LEGEND:
*—National Forest Waters
B—Brook Trout
R—Rainbow Trout
BR—Brown Trout

	Period Stocked		
	Preseason	May	June
ALBEMARLE CO.			
Moormans R., North & South Fork	B,R,BR	R	
ALLEGHANY CO.			
Jackson River (Gathright)	R,BR	R,BR	R,BR
Potts Creek	R	R,BR	
Smith Creek*	B,R	R	
Simpson Creek*	B,R	R	
Pounding Mill Run*	B,R	R	
Jerry's Run*	B		
Clifton Forge Res.*	R		
AMHERST CO.			
S. Fk. Piney R. & Piney R. Proper	B,R	B,R,BR	R,BR
Pedlar River (upper)	B,R	B,R	R
Pedlar River (lower)	B,R	B,R	R
North Fork Buffalo River	B,R	B,R	R
Brown Mtn. Run*	B,R	B,R	
Davis Mill Creek*	B,R	B,R	
Enchanted Creek*	B,R	B,R	
Little Irish Creek*	B,R	B,R	
Pedlar River*	R	R	R
Rocky Row Run*	B		
S. Fork Piney River*	B	B	
Statons Creek*	B	B	
AUGUSTA CO.			
St. Mary's River	B,R	R,BR	R,BR
North River*	R	R	
Trout Run*	B		
Buffalo Branch*	B,R	B,R	
East Dry Branch*	B,R	R	
Jerkemtight Creek*	B,R	B,R	
Ramsey Draft*	B,R	B,R	
Braley Pond*	R		
Back Creek*	B,R	B	
Johns Run*	B		
Kennedy Creek*	B		
Upper Sherando Lake*	R		
Lower Sherando Lake*	R	R	
Heartstone Lake*	R	R	
Puffenbarger Pond*	R		
Elkhorn Lake*	R	R	R
Little River*	R		
BATH CO.			
Bullpasture River	R,BR	R,BR	R,BR
Jackson River (#623)	R	R,BR	R,BR
Jackson River (Gathright)	R,BR	R,BR	R,BR
Back Creek	B,R	B,R	
Little Mill Creek*	B		
Back Creek*	R	R	R
Left Prong Wilson Creek*	B	B	
Mares Run*	B	B	
S. Fk. Pads Creek*	B	B	
Muddy Run*	B	B	
Jackson River (Hidden Valley)*	R	R	R
Piney River*	B		
BEDFORD CO.			
Hunting Creek*	R	R	R
Battery Creek*	R	R	

(Continued on page 25)

LET'S COOK TROUT



Brook trout

By MARJORIE LATHAM MASSELIN
Richmond

WHEN I was fresh out of college, and teaching ninth grade English to a bunch of kids determined not to learn it, I found, one spring morning, that I had noticeable gaps in my classroom seating arrangement. The fact that all the empty chairs should have been occupied by boys led my suspicious, school-teacher mind to the automatic conclusion that something was afoot. As soon as I reasonably could, I slipped down to the principal's office to see if he could clue me. Finding his office emptier than my classroom I handed my absentee list to what passed for our school secretary.

"Where is everybody?" I asked.

"Trout season," she replied laconically, assuming that was explanation enough, and it was.

It had been years since I had gone trout fishing, but by Saturday I had dug out my grandfather's gear and was happily headed on an expedition of my own. My two "guides" were both ninth graders, and pretty well carried away with the idea of taking their teacher fishing. One of them invited us back to his house to cook our catch. It was the freshest fish dinner I had eaten in years.

And that is the total secret of eating fish with enjoyment—FRESHNESS. Fish must be fresh. There is nothing more tasteless and uninteresting than a dead fish. No matter how good modern refrigeration methods are or may become, a dead fish is dead; it lacks character. It "lays where you leave it," so to speak. But a freshly caught fish—especially a freshly caught trout—ahhhhh! One drops a fresh trout onto the pan or into the kettle and it reacts, twisting itself into a graceful curve, so that when it is served up on a platter it looks like a fish and not a blot on the diner's horizon. It is a delight to the eye, a temptation to the tongue, a worthy dish to set before a worthy appetite.

Somehow trout and pan-frying seem to go together like

Commission photo by Harrison

Trout prepared for pan-frying are dipped in oil and then a mixture of cornmeal, salt and pepper. (The photographer didn't read the author's instructions to leave the heads on.)

love and marriage, and as long as the fish are small enough to cook through quickly this is an excellent method; but it is by no means the only method or even the only classic method, for small trout. *Truites au Bleu* is less often prepared, possibly because it does demand extremely fresh fish, preferably live fish, but it is a perfectly marvelous way to use the smaller varieties. Larger trout can be filleted or baked whole with or without a sauce.

However you prepare trout, the perfect match for them so far as the starchy vegetables are concerned, is to serve the small, new pink potatoes that come on the market at about the same time trout season opens. Cook them whole in their well-scrubbed pinkish skins, and serve them that way, to be broken open with a fork and eaten, skin and all, doused with plenty of butter. The first fresh asparagus should be in town about now, too, and the earthy flavor of the green tips is very nice with fish. Salad greens in general are apt to be in the late winter doldrums still, but Belgian endive is available, and its pale, slender leaves combined with mellow avocado slices and tomato wedges look as luscious as they taste. Make your dressing with three or more parts olive oil to one part white wine vinegar or lemon juice. Add salt and freshly ground black pepper to taste.

Now, let's get down to business with the main event.

Fried Trout

Allow one small to medium-sized trout to each person. Clean them, leaving both head and tail intact. Wash them well and wipe them dry. Dip each one in olive oil, and then in a mixture of finely ground cornmeal, salt and pepper.

Let plenty of butter melt in a heavy iron or copper skillet, and sauté the fish, one or two at a time, until each is crisp and brown.

Serve them blisteringly hot on a heated platter. Place a slice of stuffed olive over each eye, and decorate the platter with fresh parsley or cress and lemon wedges.

One word of caution in the matter of the frying: If the fish are at all on the large side, it is safer to use clarified butter since it will not burn as readily as whole butter.

You may prefer to serve the fried trout "a la Meuniere." Instead of garnishing the platter with lemon and parsley sprigs, sprinkle the fish with lemon juice and chopped parsley that has first been scalded. Then sizzle fresh butter in a clean pan until it just begins to brown. Pour it at once over the fish and serve it quickly while the butter is still frothy from the contact with the scalded parsley.

Truites au Bleu

First and foremost you MUST have live fish. Then you must have a Court-Bouillon prepared and ready to use. There are two schools of thought on the preparation of a court-bouillon for cooking trout. One is that it should be made with vinegar; the other that it should be made with wine. The one given here is my personal preference.

Combine a quart of dry, white wine and a quart of water. Add about a third of a cup of minced onion, a sprig of parsley, a small bayleaf and salt to taste. Simmer together for 20 minutes. Add 5 or 6 whole black peppercorns, and continue simmering for about 10 minutes longer. Strain.

Keep this simmering in a shallowish kettle while you stun and clean the trout as rapidly as possible. Turn up the heat so that the bouillon boils and drop in the fish. They will shrivel and the skins will split in all directions. It takes a very few minutes to cook the fish through since the whole idea is to use small trout in this preparation.

Drain the fish carefully and serve on a heated platter with the usual garnish of greenery and either just plain melted butter, which I prefer, or with Hollandaise Sauce, which is liked by many people.

What Makes A Trout Stream?

By CLIF BENOIT
Watershed Specialist
George Washington National Forest

Next To Prayer, Fishing Is The Most Personal Relationship of Man.—Herbert Hoover

THE streams! Makers of the valleys, their bubbling sound is enchantment to the angler and nonangler alike. They rise from the sea as clouds and descend over the land as rain. They are borne upon the soil as rills and rivulets, which unite to form streams and these, in turn, rivers that ever flow oceanward to complete nature's water cycle. Let's discuss for a moment some of the factors which make a trout stream.

Constant Flow

The amount of precipitation, how and when it falls, vegetation, and soil determine a stream's character. Once down from the sky, precipitation flows to stream channels and into the ground. In Virginia, it is the amount that goes in the ground, and comes out again, that largely determines the suitability of a stream for trout. Water originating from underground sources is normally neither too hot, nor too cold. Also, it provides a more constant year-round flow. Unfortunately for trout, streams dependent on surface runoff alternately "freeze and boil," flood, and dry up!

Cold Water Temperature

Flourishing trout populations are not found in streams which have temperatures higher than 70 degrees for extended periods. Trout are essentially cold-water fish. They became adapted over countless centuries to life in cold water, as their ancestors were inhabitants of arctic seas. Trout hatchery men have found that water temperatures over 70 degrees result in large losses after a few days. For best growth and survival, trout-stream water should range from 55 to 65 degrees.

Commission photo by Kesteloo

A clear, natural trout pool carved into the rock by nature's streamflow.

Dissolved Oxygen Requirement

Oxygen in trout streams varies just like temperature. The amount of oxygen available often depends on the ratio between pools and riffles. Certainly, trout survive best in well aerated water. Research has found that five parts oxygen per million parts of water yields maximum trout growth and survival.

Clean Water Is Important

A water pollutant is any material foreign to the stream. Pollutants harmful to fish often occur as industrial waste, domestic sewage, and soil particles resulting from land erosion. Frequently they are directly toxic and produce catastrophic fish kills. Certain chemicals used in insect control and acids from industrial waste belong to this group. Or, they may have an indirect effect by reducing the dissolved oxygen available to fish. Organic sewage falls into this category.

North River on the George Washington National Forest. The gabion walls (rock-filled wire baskets) prevent bank erosion which muddies the water.

Cub Run, a favorite trout stream on the George Washington National Forest. Notice the heavy shade which helps keep the water cool.

U. S. Forest Service photos

U. S. Forest Service

Gabion dams used to stabilize channel erosion on North River also create deep, cool pools for trout.

The effects from the third type of pollutant—soil particles—are perhaps less dramatic, but their lasting damage to trout and streams is often far greater. Solid particles of silt, clay, sand, and gravel wash into streams from eroded land. The results are smothered spawning sites, silt-covered pools, and scoured stream bottoms depleted of trout food. When a stream becomes filled with these particles it resembles a biological desert.

A Stable Watershed

Like most forms of life, trout do best in a stable environment. Flooding invariably results in extreme living conditions. These conditions play havoc with young "natives" and newly stocked hatchery trout. They are least adapted to strong currents. Flooding also creates lasting impacts on a stream's ability to support trout. These damages include channel widening, ensuing shallow warm water, elimination of pools and riffles, silting, and destruction of bottom organisms.

The Need For Balanced Competition

Competition for food is perhaps the most obvious, but inadequate space and spawning sites often exist. A stream is limited in the pounds of fish it can support, as an acre is limited in the bushels of potatoes it can produce. A water acre capable of supporting 50 pounds of fish can have these pounds represented by 50 large fish, 500 smaller fish, or some number and size in between.

Competition between trout and warmwater species for food and space generally increases in proportion to the amount of warmwater habitat present in a stream. Therefore, the concept of controlling or eliminating the invasion of warmwater fish into marginal trout waters of Virginia is fundamental.

The Influence Of Shade

Many trout streams in Virginia do, and undoubtedly always did, approach the upper temperature limit for trout. While the climate can be described as temperate with cold winters and a long humid growing season, frequently the summers are plagued by intervals of blistering heat. This condition often limits the trout-carrying capacity of our streams. Streambank shade can be extremely beneficial during these hot spells.

A North Carolina study shows that a stream with little or no shade will average 9 to 20 degrees higher in water temperature than a comparable shaded stream. The cool moist soil and atmosphere of the forest floor is to water temperature what ice is to scotch whiskey.

Here is what happened when shade was eliminated from trout streams. In Tennessee an upstream migration of brook trout was simultaneous with heavy logging in the streamside zone, while in Pennsylvania trout moved out of an area after deer had heavily browsed willows along the streambank.

A Growing Nation

Trout fishing isn't what it used to be! Regardless of how hard nature works toward primeval conditions, the delicate balance between water, soil, forest, and trout will never again be what it once was. There are too many people, houses, factories, and roads. The clock cannot be turned back. Many bubbling native streams of old are now spoiled, scum filled, concrete-encased drain ditches; and this is sad. Such so-called prices of progress are not necessarily inevitable.

Here in the mountains of western Virginia, the U. S. Forest Service has for many years followed a program of trout stream improvement. Guided by multiple-use management and concern for the total resource, these are some of our objectives:

1. Eliminate sources of pollution.
2. Maintain shade tree zones along trout streams.
3. Create riffles and pools to increase water oxygen and fish habitat.
4. Construct fish dams to provide water during dry spells.
5. Work cooperatively with the Soil Conservation Service to prevent flood damage.
6. Plant willows and other vegetation to improve habitat.
7. Stabilize unraveling streambanks and channels by use of protective structures.
8. Encourage coldwater release from impoundments to improve and extend downstream trout fishing.

Yes! We can have better trout fishing. True, it won't be the kind we'd like to have, nor the kind we think we should have; but if it's any consolation, interested sportsmen can demand improved conditions.

A fine creel of trout, the final payoff in a program of stocking, and stream improvement and management.

Commission photo by Kesteloo

THE NORTHWESTERN VIRGINIA DEER HERD . . .

Where does it go from here?

By J. E. THORNTON
Supervising Game Biologist

THE white-tailed deer is Virginia's leading and most sought-after big game animal. West of the Blue Ridge Mountains, and especially in the northwestern part of the state where the hunting season is usually limited to two weeks, hunting the whitetail takes on many of the aspects of a military invasion on opening day. Thousands of hunters take to the woods before daylight in pursuit of this magnificent product of nature. The hours of recreation provided by the deer in the form of hunting are almost beyond calculation. Its importance does not stop here, as hunters of the whitetail make important contributions to the economy of many communities, while the deer themselves provide value "beyond measure" to nature lovers throughout the state.

State-wide, the annual harvest of deer has been in excess of 25,000 for the past 10 years. It reached a peak in 1962, with almost 39,000 deer being checked in by the hunters. The legal kill for the northwestern section, which includes a total of eleven counties between the Allegheny and Blue Ridge Mountains, starting in the upper end of the Valley in Frederick County and extending south through Alleghany County, has exceeded 8,000 a year for most of this period, peaking out in 1960 at about 12,000. Since 1958, a total of over 90,300 deer have been legally bagged in this area. That's a lot of deer meat (and a lot of hunting!).

Where did all of these deer come from? This section has always had some deer, ever since Colonial days. For the most part, however, they were all but wiped out by shortly after the turn of the century. Poaching, hunting with dogs, and general abuse of the forest land that made up their range probably accounted for their demise. The sighting of a deer track almost anywhere in this area was a big event, and crowds gathered to observe it.

In the late thirties and early forties the Commission of Game and Inland Fisheries, with the help of the United States Forest Service and local game clubs, undertook a restocking program which turned out to be one of the most successful ever undertaken. In all, approximately 1,800 deer were stocked throughout the western part of the state, with something like 850 of these being released in the northwestern area. Most of these were released in Augusta, Rockingham, Shenandoah, and Page Counties—with a few in Alleghany and a few across the Blue Ridge in Amherst County. They were shipped from Pennsylvania, Wisconsin, Michigan, and North Carolina, with a few from eastern Virginia. Along with these stocking efforts there was a real campaign to protect these new residents of the Valley. Hunting deer with dogs west of the Blue Ridge was outlawed as of August 18, 1932. In many counties, new and stringent dog control laws were passed and protection efforts were stepped up. The game manager, a new breed of man for Virginia, brought into the picture with the signing of a cooperative agreement between the U. S. Forest Service and the Commission of Game and Inland Fisheries, contributed heavily toward the success of the program.

The environment was just right. The abundance of deer food, in the form of browse that sprang up after wholesale logging operations and uncontrolled burning of the forests came to an end, created ideal conditions for the growing deer herd. As a result, legal "bucks only" seasons were begun as early as 1945 in most counties that had been stocked. With this type of season, the deer herd continued to grow—and the deer harvest increased accordingly—and the deer hunter was happy!

With this increasing deer herd, trouble began to appear on the horizon. Deer damage complaints began to be the order of the day, and damage to crops, orchards, and forest reproduction became a serious problem. As early as 1949, deer food (browse) began to fade out. Occasional "die-offs" occurred, brought on by overpopulations, as early as 1950. After the first 8 to 10 years following logging or fire, much of the area which had been ideal deer range reached the "pole" stage—out of reach of the deer—resulting in almost total elimination of deer food and cover in some of the second-growth forests.

Nearly all counties west of the Blue Ridge reached a peak in deer populations between 1956 and 1960—resulting in an unprecedented legal kill, peaking out at over 18,000 deer in 1960 (12,280 in northwestern Virginia). The seasons varied, of course, with the first "hunter choice" or doe season in 1951 on the Big Levels Area (U. S. Forest Service) in Augusta County. From 1959 through 1961, the season was three days "hunter choice," followed by three days of "bucks only." Since 1962 the season over most of the area has been a one-day hunter's choice on opening day, followed by one to two weeks of "bucks only" season, with the last few years being a full two-weeks season. A low in deer kill was reached in 1963—with a gradual increase each year since until 1967 when another drop of about 10 percent occurred, but still with a kill above the 1963 low.

Why the drop in deer kill at this time? With such high earlier kills occurring, large numbers of hunters from outside the area were attracted, many of them from out of the

(Continued on page 20)

Too many deer mean trouble. As much as hunters like to see deer herds multiply, too many deer are not welcome where damage to forests and crops cannot be tolerated.

Commission photos by Kesteloo

BIG RACK

By MAX CARPENTER
District Game Biologist

Commission photo by Kesteloo

Dorsey Breedon (right) shows last year's top trophy, the third largest ever recorded in Virginia, to author Max Carpenter.

"THAT big deer has made me feel mighty proud," was the comment of Mr. Dorsey Breeden of Shenandoah, Virginia, when he learned that he had won the 1967 Western Region Big Game Trophy Contest held in Harrisonburg last fall. In fact, he was so proud that he did not want to part with the head for it to be entered in the state contest held in Newport News along with the Peninsula Sportsmen's Association Show. As it turned out, he easily won the state contest 31 points ahead of the next largest head and 42 points ahead of the big deer that won the eastern contest.

Any set of antlers that scores over 200 points is a large one and those that score over 220 points are few and far between. Antlers that score over 240 points are in the "elite" class, and when the score reaches 250 or above, it is in the "super" class. In the past 20 years of antler scoring in Virginia, there have been only 2 deer to score over 250 points. During the same period only 5 scored over 240 points, and only 12 have scored over 220 points. No one knows for sure how many heads have been entered in competition, but it is safe to say well over 1500 heads have been measured in both the eastern and western areas of the state.

By way of explanation for those who are not familiar with the above "scoring," a somewhat simplified Boone and Crockett system is used in Virginia. The beams on both sides and the length of all tines are measured to the nearest 1/8 of an inch. Circumference measurements of the beam between the tines are made, and spread and tip to tip length is measured. Allowance is made for symmetrical heads. When all the figures are added, the total score is a measurement of volume for the antlers.

The all-time title holder for the state goes to an Isle of Wight County deer killed in 1962 by Peter Crocker, Jr., of Windsor, Virginia. It scored 267 7/16 points. The second largest deer, with a score of 252 3/16 points, was killed in 1956 by Lloyd Lam, formerly of Bridgewater, Virginia. Then in the fall of 1966, Mr. Breeden killed the third biggest deer in the state that scored 249 4/8 points. Interestingly enough, the No. 2 and No. 3 deer both were killed along the Massanutten Mountain in Rockingham County, just across

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COMMISSION-OWNED LAKES:

Lake Shenandoah

By HARRY GILLAM
Information Officer

LAKE Shenandoah in Rockingham County has a number of features which make it quite different from the other Commission-owned lakes. It was first intended as a put-and-take trout lake, but it was soon discovered that the addition of warm-water species could extend the fishing opportunity without affecting trout success. It was completely renovated in 1958 and stocked with bass and bluegills. Since then muskellunge and channel catfish have been added in addition to the annual stocking of 400-800 trout.

Trout are stocked in the fall and grow during the cold winter months when the warm-water fish are dormant. During the summer they retreat to a cool oxygenated layer midway in the lake which is not attractive to warm-water species. Thus the trout and the panfish live together in a two-story fashion with little direct competition.

Although the lake has a larger watershed than is desirable for fertilization, productivity has remained good. Well over 100 pounds of fish are taken per acre each year with ½ pound per person per trip the average creel. The lake is located on a plateau east of Harrisonburg near Massanetta Springs and is surrounded by agricultural land. A concessionaire has boats and electric motors for rent and bait and food for sale. Private boats may be launched from the ramp provided. The concessionaire offers camping and picnicking for a fee on private land near the lake.

Trout fishing is best in April and May and again in October. Bass fishing is good most of the season with July and August being the slack months. Bluegills bite best from June through September. Recently stocked catfish and muskies haven't shown up on fishermen's stringers in significant numbers yet.

The lake is open only from 12 noon on the first Saturday in April through October 31. Bass under 12 inches are protected. Only 5 trout may be creeled each day. Fishing pressure is relatively heavy with up to 100 anglers using the lake on weekends in April, tapering off to about 40 during October.

VIRGINIA WILDLIFE ☆ ☆ ☆ ☆

CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

BEAR KILL BOUNCES BACK. Virginia's bear harvest jumped from last year's record low to a comfortable total of 339 during the season just ended. Augusta County led the state with 49 bears, followed closely by Rockingham where 47 were bagged. Botetourt County ranked third with 25 reported kills and Bath County followed with 23. Seven bears were reported from the Dismal Swamp portion of Nansemond County.

The contrast between this year's and last year's kill is typical of the direct correlation between the abundance of mast and the resulting bear kill that has been noted by biologists over the past decade or more. In the fall of 1966 mast was almost nonexistent because of a killing frost in late May of that year while last fall there was one of the best mast crops ever seen in Virginia's mountains. Although there is little scientific evidence to back it up, the popular theory is that in years when mast is scarce the bears go into hibernation early and are not available to the hunters, while in years when mast is abundant they remain active throughout the hunting season.

WATERFOWL FOOD IMPROVEMENT NOTED IN BACK BAY. Submerged vegetation in Back Bay has shown a marked improvement following the artificial introduction of salt water which began in the summer of 1965, reports Game Commission Research Biologist Joe Coggin. Approximately 260 samples of bottom vegetation taken in late fall revealed 25% with vegetation last fall as opposed to only 12% with vegetation in 1966, the lowest figure reported during the 8 years the sampling has been undertaken.

"An invasion of milfoil is responsible for part of this increase," Coggin said, "but there was a noticeable increase in widgeon grass and other plants important to waterfowl." Waterfowl census figures for the Back Bay area indicate that the ducks noticed the difference also. A total of 16,625 ducks were counted in the area during the mid-winter waterfowl census in early January of 1968 as opposed to 8,526 ducks recorded during the corresponding period a year earlier.

Salinity readings from the bay have shown a definite increase in salt content since the pumping began with levels of over 10% noted in some sections. A salt content of about 10 percent is considered optimum for waterfowl and fishlife found in this unique brackish environment.

GOBBLER SEASON SET FOR 72 COUNTIES. A three-week spring gobbler season, which will begin April 22 and end May 11, was approved for 72 Virginia counties by the Commission of Game and Inland Fisheries at their March 15 meeting in Richmond.

Hunting hours will remain from one-half hour before sunrise until 10 a.m. each day with dogs and organized drives prohibited. Only hunters with unused turkey tabs on their 1967-68 big game license may participate. Counties included for the OPEN SEASON are: Albemarle, Amelia, Amherst, Appomattox, Augusta, Bland, Brunswick, Campbell, Carroll, Charles City, Charlotte, Chesterfield, Clarke, Culpeper, Cumberland, Dinwiddie, Fairfax, Fauquier, Floyd, Franklin, Frederick, Giles, Grayson, Greene, Greensville, Hampton (city), Hanover, Henrico, Henry, Isle of Wight, King George, King William, Loudoun, Lunenburg, Madison, Mecklenburg, Montgomery, Nansemond, Nelson, New Kent, Newport News (City), Nottoway, Orange, Page, Patrick, Powhatan, Prince George, Prince William, Pulaski, Rappahannock, Roanoke, Rockbridge, Rockingham, Shenandoah, Southampton, Spotsylvania, Surry, Sussex, Warren, Wythe, York, and those portions of Smyth, Tazewell, and Washington Counties lying outside the bounds of Clinch Mountain and Hidden Valley Wildlife Management Areas. Counties listed include National and State Forests, where applicable, and National Forests, Commission-owned lands, and military areas will be open in Alleghany, Bath, Bedford, Botetourt, Caroline, Craig, Highland and Stafford counties which are otherwise closed to spring gobbler hunting.

Birds of the Eastern Shore (Continued from page 5)

a great clamor from the agitated birds wheeling overhead. But if one becomes stationary in the taller growth, the birds drift back, perch near their nests and soon contentedly settle on their clutches of blue-green or mottled brownish eggs.

There are several ways to reach the barrier islands from several ports of embarkation. For those who have their own boats on trailers, there are launching ramps at Wachapreague, Quinby and Oyster. Of these, Wachapreague has the most facilities with a marina almost at the doorstep of a hundred-room hotel and motel. Boats of all sizes from outboards to forty-five foot cruisers can be rented or chartered by the day, and directions will be given to reach the islands. The fishing is good and bait and tackle may be purchased at the marina office if one wants to combine birding and fishing.

In the mouth of Wachapreague inlet, there is a large,

Above, great blue heron over Finneys Creek marsh. Below, a double-crested cormorant stands at attention on a channel marker.

crescent-shaped sand bar which is dry except under conditions of severe storms. This supports a large colony of royal terns, along with other kinds of terns and black skimmers. The sheltered inside cove in places is deep enough to allow a boat to nose right up to the beach, but caution must be observed as the sandy bottom is always shifting. One good feature of this area is that all navigating is done over no large body of open water. Most of the half-hour run is thru narrow creeks or "guts." Also of interest, when the tide is low, is observing the bird life on the mud banks of these "guts." Each turn may promise a different species of heron, snipe, tern, clapper rail, duck, goose or gull, depending on the season of the year. On the higher, drier parts of the marshes are scattered colonies of Forster's terns, which allow a close approach by small boat. If one secures the boat at the bank edge and sits quietly, the home life may be observed as close as twenty feet. At high tide in migration times, these marshes are favorite feeding and resting grounds for flocks of Hudsonian curlew or whimbrel. Spring migration occurs in late April and early May, and the fall migration as early as mid-July, with stragglers lasting into September.

In some areas of more open water, particularly along the edges of the Intracoastal Waterway, large flats appear as the tide ebbs. Lasting for about one hour after the oyster shells are visible jutting thru the surface of the water is the time for great bird activity. First to appear are the egrets followed by whimbrel, oystercatchers, black plover, yellowlegs, willet, dowitchers, and several species of smaller snipe until as the falling tide bares the flat, it is almost impossible to distinguish from a distance the many snipe from the many

Semipalmated sandpiper walks on exposed mud flat at low tide along intracoastal waterway near Wachapreague.

oysters. The reason for this activity is the exposure of food which can be probed out of the soft wet and extremely tenacious mud on which no human, unless endowed with bird-like feet, should ever attempt to walk.

It is quite boring to give a list of all the birds of this area. However, it might be well to list the number of species seen on Virginia's Eastern Shore. The Chincoteague National Wildlife Refuge reports 254 species, of which 92 breed locally but not necessarily on the refuge. Twenty-four additional species have been recorded once or twice. Even a bald eagle, whose numbers are diminishing because of DDT spraying of land, can be spotted slowly gliding overhead. On our own small farm of 60 acres in the middle of the peninsula we have positively identified 82 species with 30 nesting and 14 within 200 feet of the house. We have even seen the prothonotary warbler with food in its bill along the edges of a brook which runs thru our woods. It is always pleasant to have dependent nests of orchard and Baltimore orioles hanging over our driveway and to hear the melodious notes all day long. The electric wires into the house are brightened by the iridescent blue of indigo buntings who fly from there to their nests in the blackberry bushes bordering the road. A bird house in the meadow is adopted by a pair of bluebirds; a Carolina wren is carrying nesting material into a canvas bucket hanging in the barn, and we can't close the door until the young are launched. We hear the loud monosyllabic note of the crested flycatcher who is stuffing the inevitable snake skin thru the opening of another bird house on a pole near the chicken house; and, of course, the continual imitation of other bird notes comes from the mockingbird sitting on top of a cedar tree.

Equally redundant would be a description of the bird life of each creek on the Chesapeake Bay side. Many of these resemble the "guts" of the seaside only on a larger scale. Here can also be seen herons, willet, snipe, terns, gulls, and clapper rail with an osprey's nest silhouetted against the sky resting in the high bleached forks of an old dead tree. Fall and winter are marked by cormorants resting on dock posts or channel markers while small flocks of old squaws and buffle-heads scurry across the water at the approach of a striped bass fisherman. Large white whistling swans and Canada geese also frequent these wide creeks. The geese go inland to feed on adjacent corn fields and congregate in large concentrations on the estates of Northampton County.

While Garden Week presents an excellent time for the bird watcher to visit the Eastern Shore, there is no time of the year when birding will be found dull either by land or by sea.

Left, snow geese landing on Chincoteague National Wildlife Refuge. Below, American egret flying over nesting area near Parramore Island.

Below, left: Intimidation behavior of young little green herons hissing at intruder near Parramore Island. Below, right: Greater yellow-legs feeding in marsh pond, Onancock Creek. Above: Young glossy ibis on marsh near Wachapreague inlet.

Secrets of the

BUMBLEBEE

By ALBERT G. SHIMMEL
West Decatur, Pa.

WHEN the gray fur of the pussy willow catkins take on their dusting of yellow pollen, the Woods Walker instinctively cocks his ear for the heavy droning of the bumblebee. When he sees her (in early spring it is always she) blundering sleepily from one catkin to another, her legs heavy with their load of golden pollen, he is assured that spring is officially under way. Her appearance leads him to speculate as to just where she spent the winter. She is the only survivor of her colony. All others, drones, workers, and the old queen have succumbed to frost and cold. To her and her only is entrusted the precious spark that will engender new hordes of gentle freebooters, handsome in their black and gold velvet. It is only with their help that fields of lush red clover provision our dairies, fatten our steaks and delight our eyes. Without the help of the Bombidae they would soon be only a memory.

Bumblebees are social insects having a caste system similar to their cousin, the honey bee. They are carpenters and miners, living underground or in available cavities. While their social order is not so highly developed as the honey bee they fulfill their purpose in the plan of nature efficiently. The logical development of each creature to fill a particular need is one of the marvels of life.

The long tongue and sturdy strength of the bumblebee is adapted for probing the nectary of red clover and other members of the legume family. These are out of reach of the shorter tongue of the honeybee. The bumblebee is especially partial to lupines. It is a working partnership with the bee distributing the pollen in return for a generous supply of nectar. To observe a bumblebee, his pollen baskets filled with orange pollen and his black and yellow coat contrasting with the bluebonnet blossom, is to experience a living symphony of color harmony.

The bumblebee practices piracy, i.e., taking over a treasure that is not rightfully his. The wild azalea secretes its nectar at the base of a long narrow trumpet made expressly for the long coiled tongue of a butterfly. A heavy insect, alighting on the trumpet, will be dumped from the blossom without ceremony. The bumblebee simply alights at the base of the blossom, cuts a neat hole above the nectar pot and collects the bounty without paying tribute. When azaleas flame across the land, evidence of the bee's piracy can be found. Sometimes the careful observer will catch the culprit in the act.

Aerodynamic engineers have calculated, applied theories, made wind tunnel tests and drawn conclusions that the bumblebee is not capable of flight. They have neglected to inform the bee, and as a result he continues his pursuit of life's pleasures on wings that baffle the learned experts.

Hibernation is a fascinating phenomenon. It answers the question of how the young queen survives to perpetuate the colony. As a youth I searched in vain to discover this secret. Where? One book said, "She tucks herself away in a mossy stream bank or secrets herself in a deep rocky crevice." Another suggested, "An old animal burrow or a tussock in a sphagnum bog." I seemed to detect a note of uncertainty in the statements. Reason suggested that cold and dampness would be conditions that hibernators would be likely to shun.

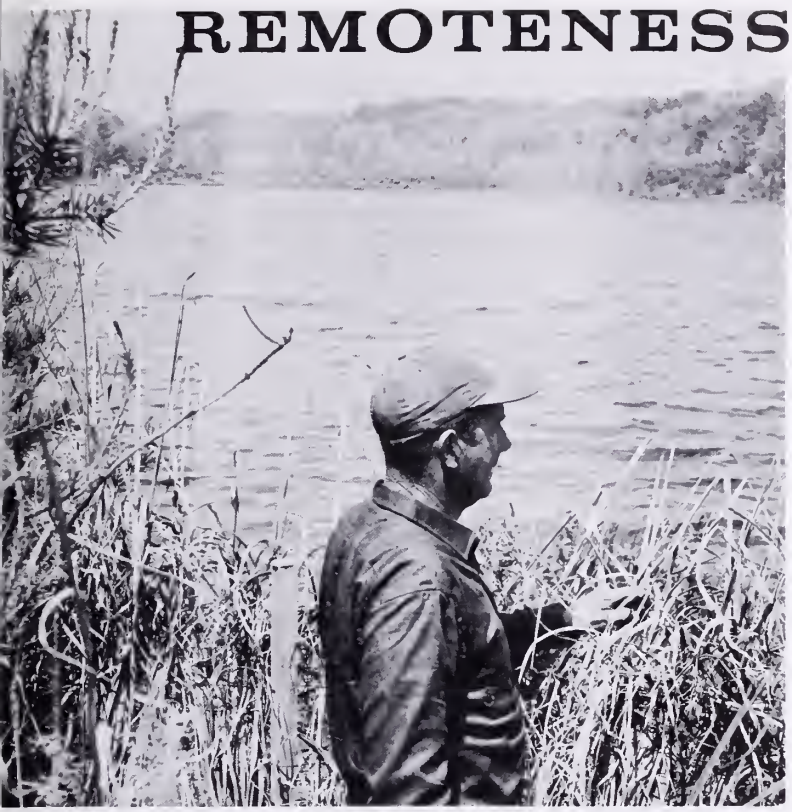
Years later I found a *Bombus pennsylvanicus* safely tucked away in an abandoned wood mouse nest, hidden under the decayed wood in a hollow maple. A second bee chose the padding in the upholstery of an abandoned automobile. At last I had visual evidence that solved a part of the mystery.

As is the case of many problems the answer to another member of the hibernating family was found where least expected. Some pine timbers that had been stored in the shed loft were taken down. Several holes from three-eighths to a half inch in diameter were discovered. We cut off a short section and carefully split it with the grain. At the end of a five inch tunnel we found a queen of the family *Xylocopa virginica*, snugly protected from wet and cold, drowsing away the winter. We fitted the pieces together and returned her to the loft.

When the pussy willow catkins turn to gold we will listen once more for the drowsy humming of our queen. . . . When azaleas vie with the dogwood blossoms, we will try to capture on film the nectar pirate at his plundering.

The bumblebee distributes pollen in exchange for a generous supply of nectar.
Commission photo by Kesteloo

REMOTENESS AND FISH AT GATEWOOD LAKE



By BILL COCHRAN
Roanoke

TUCKED away in the mountains west of Pulaski is Gatewood Reservoir, one of the few impoundments in Virginia where you just might see as many deer along the shoreline as fishermen.

The 162-acre lake is in a wild, rugged setting. Sealed off by rolling mountains which are thicky clothed with a deep green forest, the lake has something of the appearance of a Walden Pond lost somewhere in the remoteness of New England.

As far as many Virginia fishermen are concerned, it might just as well be up north somewhere, because most have never heard of it, much less enjoyed the angling it has to offer.

But the handful of fishermen who are familiar with the lake take delight in catching bass, bluegill and trout from its sparkling blue-green waters.

Gatewood Lake was formed approximately eight years ago when the Town of Pulaski dammed Peak Creek as a supplement to its water supply. The impoundment backs up into property owned by the Jefferson National Forest; therefore, it lies in an area with a large acreage of public land—some 2,000 acres owned by Pulaski, the rest by the national forest.

Since the lake is a water supply, strict rules govern its use, and these have helped preserve its wilderness flavor. The only boats allowed on the lakes are those available for rent at the dam, which is reached seven miles west of Pulaski on Route 710.

These boats, large, wooden and heavy, must be rowed or powered by an electric motor. No gasoline engines are permitted on the impoundment other than one operated by H. B. Cox the caretaker. Therefore, there are no noisy speed

Bluegill fishing is Gatewood's big attraction.

H. B. Cox, lake caretaker, has boats for rent.

Gatewood Lake (Continued)

boats, no hotrod outboarders, no water skiers—just peace, scenery and fishing.

Although the fishing is well away from the crowds, it is not a pushover. You must know the lake, use skill and work for your catch. The cream of the easy fishing crop has been skimmed off.

A favorite attraction at Gatewood is bluegill fishing. The lake doesn't have the looks of bluegill water. It is deep and cold. Normally, good bluegill water is fairly shallow, warm, pond-like water.

But, still, the lake produces heavy strings of bluegills. A favorite bait is catalpa worms, those "ugh!" looking creatures, fat, juicy and ugly, which are normally found on catalpa trees. Find a catalpa tree and you'll find catalpa worms. Find catalpa worms and you'll find bluegills. It's that simple.

A number of Gatewood bluegill fishermen pick catalpa worms whenever they have the opportunity, then keep the creatures in their home freezer, wives permitting, ready for a bluegill fishing trip.

Gatewood also has rainbow and brown trout. Catches of these better than 20 inches have been made. The Virginia Commission of Game and Inland Fisheries has been annually stocking the impoundment with fingerling trout each winter.

The trout are normally caught by fishermen trolling lures such as the flatfish or while baitfishing with nightcrawlers.

Several largemouth bass over six pounds are landed out of Gatewood each season. A variety of conventional bass lures are used. One of the most productive is a leadhead jig with porkrind.

Gatewood offers plenty of room for good fishing. The lake is big for its size. It is two miles long and has 13 miles of shoreline. It is what you might call a finger lake, long and narrow with few coves and points. Since anglers must either fish from the bank or travel across the lake in a slow rowboat, competition for fishing space is sparse.

Boats may be rented for $1 the first hour and 50 cents an hour thereafter. The charge is $4.50 for eight hours or more. An electric motor is a great help in exploring the lake's fishing.

For a nominal fee, Cox will tow your boat out to any part of the lake using his outboard. You can work your way back to the dock, or he will come after you. This is a valuable service many fishermen take advantage of.

There is no charge for fishing from the bank. Some fishermen enjoy angling in Peak Creek below the dam. This creek once dried up during the summer, but a controlled flow of water out of the lake has turned it into a trout stream.

Enjoying fishing, remoteness, and scenery, at Gatewood Lake.

The woods around the lake contain good game populations. Deer, bear and turkey are frequently seen along the shoreline. Ducks appear to enjoy the secluded water, and some duck hunting is done in the winter. The wildlife all adds considerable interest to the fishing.

Gatewood does not have a campground or other organized recreation areas. Some primitive camping is done along the shores of the lake. Discussion is being given to establishing organized recreational facilities.

For those who seek water-oriented recreation, such as power boating, water skiing and swimming, Claytor Lake is nearby.

As for Gatewood, the lake is yet a wild, primitive fisherman's and nature lover's hideout. Some hope it will always remain that way.

Cox will tow your boat out to a good fishing spot.

Big Rack (Continued from page 11)

the mountain from each other. As a crow flies, it is probably less than 10 miles from one area to the other.

Every deer hunter heads for the woods on opening day with dreams of bagging a big buck. Yet each hunt is a unique experience, very seldom duplicated in every detail. Mr. Breeden told his story to me this way—

"This hunt started in the town of Shenandoah, which is along the Shenandoah River in Page County. Just across the river in Rockingham County is a long ridge that runs down into a section of the county known as Rinaca's Corner. These three Shifflett boys had been watching this big deer all summer, often in a cornfield near this ridge. They had him spotted right up to opening day and, in fact, they saw him cross a road early in the morning of the first day of deer season. One of the boys followed the big buck and the other two went around about 3 miles to head him off on the other end of this ridge.

"At the time, I did not know that the boys were after this deer. Having had some heart trouble, I had decided to row across the river and hunt on this ridge that I can see from my house. Deer sign along the ridge was heavy, and I thought my chances of getting a deer there were good. It was a little after 7 a.m. when I left the house, and it took only a few minutes to row across the river and work part way up the ridge to a stand by a tree along the deer trail. About 7:30 I heard something coming, and then I saw this big deer come walking along with his head up in the air. As I raised up to shoot, he must have scented me for he froze in his tracks. Just as he moved one foot, the first shot from my 7.62 Russian rifle caught him in the chest behind the front leg, and he went down. He was thrashing around, so I shot him through the backbone but found out later the first shot would have been enough.

"It was then that I learned about the Shifflett boys following him, for one of the boys heard me shoot and came up and helped me drag him down the ridge to the river. We pulled the boat up on the bank and tipped it up and turned the deer into it for he was too heavy to lift. On the other side of the river, my wife joined me to drag the deer up to the road. A rope we were using broke, and finally a chain was put around his antlers to drag him.

"When we got him to the road, Richard Brown came by in his pickup truck and hauled him the short distance up to the house. Then Lester Vinds came by and hauled him up to Helen Glenn's check station where they weighed him at 216 pounds. Word spread like wildfire that I had killed that big deer and there must have been a hundred people come to see it. I have only hunted two or three years for deer, and this is the first deer I ever shot at and got. Once before I had shot at a 10-point buck, but it got away to another hunter.

Left, Breedon and author look over the section of Rockingham County known as Rinaca's Corner. Below, lucky hunter points out the place where he collected his big rack.

Commission photos by Kesteloo

"Those people thought that I knew the deer was over there on that ridge and some even accused me of baiting him in, which was not true. It just happened I was at the right place at the right time. Yes, sir, that deer has made me feel mighty proud."

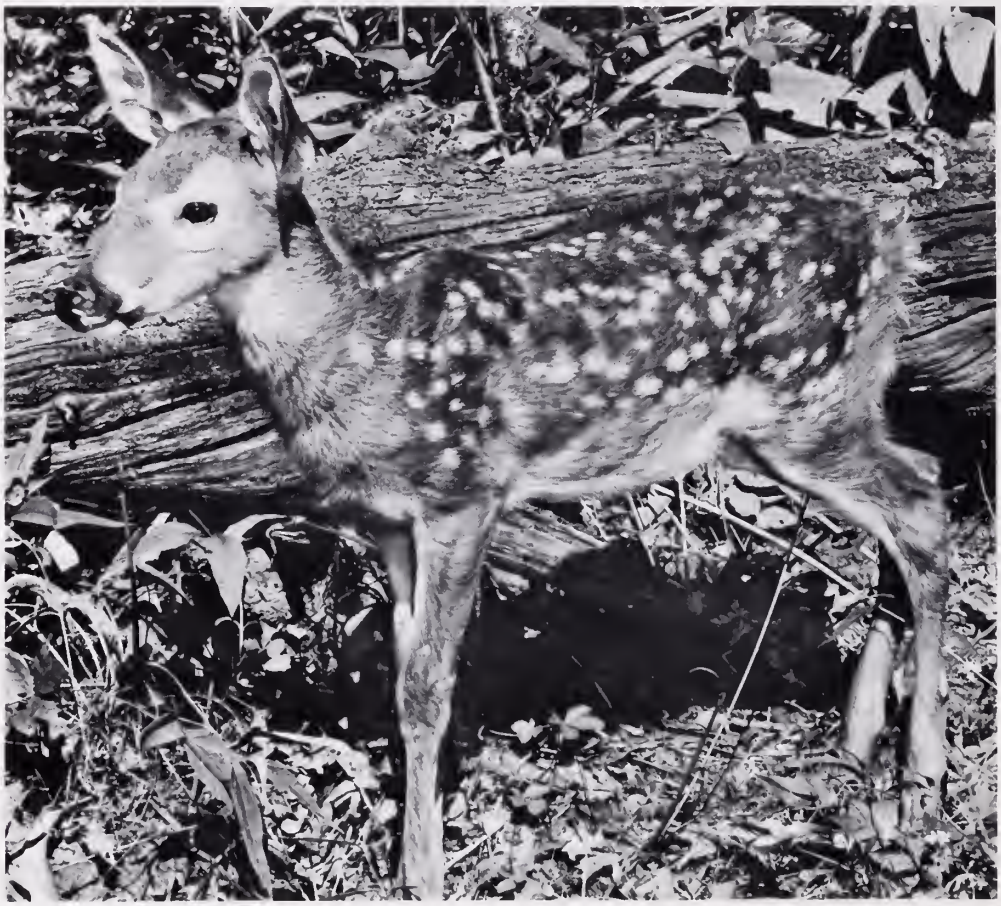
Mr. Breeden's story is a typical one and answered my first question, the one most asked a successful hunter, "How in the world did you kill such a fine deer?" Killing a fine trophy does make you proud and is an experience never to be forgotten. It is especially helpful if fine trophy heads are brought in to the two Big Game Trophy Contests, not only to make the show more interesting, but to afford a chance to have a permanent record made of the head. If the antlers score high, the record can be sent on to the Boone & Crockett Club in Pittsburgh, to be entered in a show that is nation-wide. This promotes interest in trophy hunting and helps the cause of conservation by making the hunter more selective in the game he takes.

Northwestern Va. Deer Herd (Continued from page 10)

state. This was almost bound to result eventually in a lower deer population and a drop in the kill. Deer populations in some areas unquestionably were reduced by years of high kills caused by heavy hunting pressure. Deteriorating range condition, along with poor mast crops, caused a reduction in fawn production—resulting in a "downward adjustment" of the deer population which culminated in the low kill of 1963. This was, of course, inevitable—and a healthy situation. As much as the hunter would like to see "whitetails running ahead of him in every direction," the deer range could not support such a population for the long haul. There just wasn't enough food, after the regenerated forests got beyond reproduction and sapling stages. The deer hunters' stamping ground is made up of someone else's (public or private) land, where timber must be produced, and orchards, gardens, and cropland must be cultivated. Deer, if not kept in proper balance, are not always welcome, especially where excessive deer damage cannot be tolerated.

The 1967 deer harvest for northwestern Virginia was approximately 7,800 deer—roughly a 10 percent drop under the 1966 season. About 2,600 of these were does, and Bath County again was the leading county, with 1,803 deer, followed by Rockingham and Augusta Counties. The 1967 kill of 7,800 deer exceeded the low kill of 1963 (7,090) by roughly 10 percent. It is believed that the drop in kill in 1967 under 1966 was caused not necessarily by a drop in deer population, but primarily because of the excellent crop of acorns, grapes, dogwood berries, and other natural food which kept the deer back in the forest and, thus, less available to the hunter. Hunting pressures were, likewise, down somewhat in some areas because of the corresponding West Virginia season. Even with the drop in deer kill, the harvest of antlered bucks per square mile of deer range remained proportionally high (for example, in Shenandoah County it was 1.25 per square mile) as compared with other sections of the state where it has, in previous years, been as low as .4 antlered bucks per square mile. This figure is the one constant measurement in deer kill data, regardless of the type of season.

For a number of years the Game Commission has been collecting information on the physical condition of the deer herd at representative big game checking stations throughout the area. By weighing and aging the yearling buck as it comes through the big game check station, the Commission is able to keep tabs on the general condition of the deer herd in the vicinity of the check station. For example, a yearling buck (1½ years old) should, assuming it has received proper nutrition, weigh at least 110 pounds (live-weight) and produce a 6-8 point rack (or antlers). If proper nutrition is lacking, he will rarely produce more than spikes. As his food situation becomes more critical, his weight will fall off. Thus, this information collected year after year provides a trend in deer herd condition which can be useful in the management of the herd.



A good fawn crop is one indication of good deer management and a vigorous, healthy herd.

Commission photo by Harrison

From this information, deer herd conditions throughout northwestern Virginia are holding their own but not improving to any marked degree. The percent of spikes in the yearling buck sample has increased over the whole area—indicating some degree of range deterioration. Weights remained approximately the same, in spite of the excellent mast crop in the fall of 1967.

Fluctuations in deer kill from season to season are to be expected—harvest depending a great deal on weather conditions, hunting pressure, types of season, and game food—even with the same sized deer herd. Deer populations must

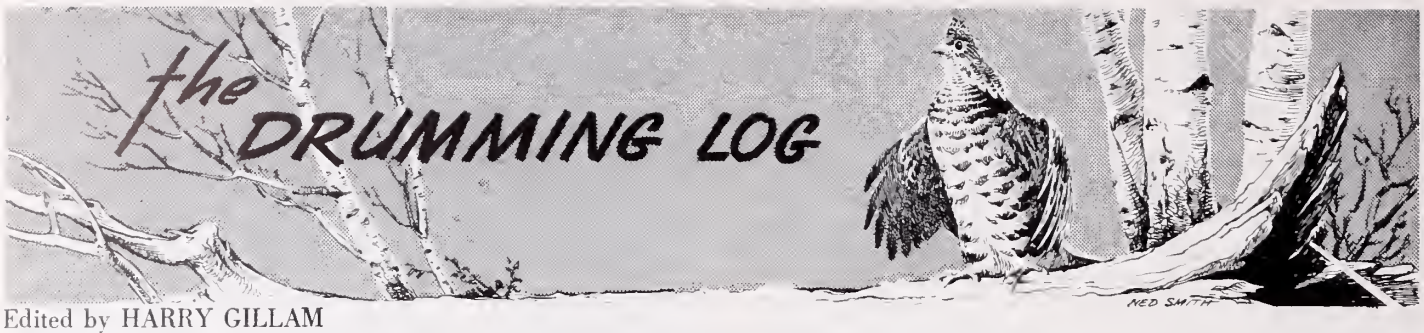
be kept within the "carrying capacity" of the range and, in cases where the range has deteriorated, below carrying capacity, in order to give the range an opportunity to recover. The net result of this type of harvest is to produce deer of good weight, good racks, and a good fawn crop (the signs of a well-managed deer herd). A buck season alone cannot do this, and although a season calling for an antlerless harvest is not necessarily a must *every* year, it surely must be used when called for in order to hold the deer herd within the capacity of the range to feed it. One good thing about deer or game harvest of any kind is that hunting pressure is generally self-limiting, regardless of the type of season. If hunters are not reasonably successful, they either go some place else to hunt or quit, thus taking the pressure off the remaining game.

Efforts to produce additional deer browse on public land (National Forest and Commission-owned), thus increasing the number of deer a given area of land can support, is a continuing activity. Timber and pulpwood sales are the most practical tools in this endeavor, but in some cases are limited by economics. The system of "even-aged management" of its timberland recently adopted by the U. S. Forest Service should produce some beneficial results. It just happens that, in addition to being the most practical way to manage timber, it also is probably the most practical way to "make more deer food." As deer food goes, so goes the deer herd.

Increase in yearling spike bucks, above, indicates some deterioration in range conditions. Left, and below: Information on deer weights and physical development is collected regularly at checking stations.

Commission photos by Kesteloo

Deer hunters throughout Virginia, and particularly in northwestern Virginia where there is such a large proportion of publicly owned lands, may look forward to the future with optimism. Fluctuation in the deer harvest, of course, will always take place. Public support for good management and seasons based on sound biological facts will go far toward providing a balanced, healthy deer herd—and a lot of recreation for the deer hunters of Virginia.



Edited by HARRY GILLAM

Amherst Trophy

Victor Petit, on the right, bagged this handsome 10-point trophy in Amherst County last season.

Navy Installation Wins Award For Conservation Work

The U. S. Naval Supply Center, Cheatham Annex, Williamsburg, was recently cited by the Defense Department for meritorious achievement in support of the Natural Resources Conservation Program during 1966. Efforts of base personnel in developing programs for the conservation, enhancement and management of natural resources which include hunting, fishing and other outdoor recreation on the base were praised. The Naval Weapons Station, a sister installation at Yorktown, was named the most outstanding in the nation in Natural Resource Management in 1965.

Outdoor Writers Manual

Many hunters and fishermen think that they would like to be outdoor writers. A surprising number of them speak mysteriously of a super magazine story they plan to write some day or the great American book to end all books on how to catch fish or bag game on every trip.

For the dreamers who may wish to put word to paper, there's an excellent guide available. The *Outdoor Writers Instruction Manual*, written by members of the Outdoor Writers Association of America and compiled by the organization, has chapters by 30 successful writers, photographers, artists, broadcasters, lecturers and film producers on how to get started.

This excellent book is available for $3 from the National Shooting Sports Foundation, Inc., 1075 Post Road, Riverside, Connecticut 06878.

Forest Service Publishes Bird List for Southern Forests

A new publication of the U. S. Forest Service, *Birds of the Southern Appalachians*, will be of interest to "bird watchers" and other forest visitors. The 48-page booklet is not an identification guide but does give detailed information on the range of the many bird species and the periods that they are most frequently found in the area. A total of 251 bird species are included in the listing arranged in the order of the A. O. U. checklist.

Single copies of the publication may be obtained at the National Forest District Ranger Offices or from National Forest Headquarters in Roanoke or Harrisonburg.

Litterbugs Reported Closing Hunting Grounds

Indiscriminate littering is resulting in hunting grounds being closed and, in some cases, may actually be harmful to game, according to a 50-state survey of fish and game departments just completed by Keep America Beautiful, Inc., the national litter-prevention organization.

Thirteen states reported that land had been closed to hunters because of littering. In North Dakota, for example, it is reported that 200 sites, comprising some 50,000 acres, have been closed. In Connecticut it is estimated that up to 3,500 acres a year are being closed to hunters. Some 10,000 acres have been closed in West Virginia.

Dog Confinement Urged

With the coming of spring, does are heavy with fawns and many of our game birds are starting to nest. The prolific cottontail may already have a new family growing up. It is this time of year that old Rover may develop a strong desire to roam the countryside and in so doing may do untold damage to next fall's potential wildlife crop. Although the family dog may seem docile enough around the house, it is very unlikely that he has lost his natural hunting instincts.

The sight of a gentle beagle standing over a deer carcass with blood dripping from his jaws comes as a shock to most people, but it is a common occurrence in the woods and fields of our state. Most dogs will chase deer, especially if they get together in packs, with the owners often completely unaware of their sordid activity. Nearly all dogs will destroy quail, rabbit and turkey nests or catch the young on the ground. So, for better hunting next fall, keep your eye on "Bowser" this spring.

Freak Demise

This mourning dove was found dead by Game Commission personnel, its upper mandible wedged through the lower, probably from collision with some object. The bird was emaciated, apparently having starved to death because of its inability to eat.

Edited by ANN PILCHER

Nature Camp's Little Smithsonian

Mrs. Herbert Silvette, Conservation Chairman of the Virginia Federation of Garden Clubs' Shenandoah District, calls Nature Camp's natural history display "The Little Smithsonian." Here a camper studies part of this excellent exhibit.

Nature Camp, located on Big Mary's Creek in George Washington National Forest, 3½ miles from Vesuvius (in a beautiful little valley between McClung and Mine Mountains), will be in session in 1968 on the following dates: June 16-June 29—*grades 9, 10, 11, 12;* June 30-July 13—*grades 7, 8;* July 14-July 27—*grades 6, 7;* July 28-August 10—*grades 5, 6.*

Sponsored by the Virginia Federation of Garden Clubs, Inc., the camp seeks to arouse interest in plants, birds, wildlife, soil, water and their interrelationships, and offers professional, concentrated instruction in the wise use and conservation of these resources. Swimming, hiking, picnics, campfires, games, moving pictures, music and folk dancing help round out full days of instruction and recreation.

Camp fee is $90 per session, with application forms available through Mrs. Fred Schilling, Executive Director, Box 148, Route 2, Afton, Virginia 22920.

Best To Be Honest

A 16-year-old western Virginia youth was fined $50 for hunting deer with a dog plus an additional $50 for using someone else's hunting license and giving false information when checking a deer in at a checking station.

Dear John,

You can't imagine the experience I have had this summer at Nature Camp. You learn more here than you do in two years at school, and this camp is only two weeks! We have three classes a day, each lasting for an hour; the rest of the time is free period. During free period you can go on hikes, swim, work on your notebook, or just go to sleep, *if you have time! ! !* Sunday we all go on hikes. My group went up McClung Mountain. It was more fun than I've had in ages. In a lot of places the food is like hogwash—you know what I mean? Here it's really good, just like home—almost. You have loads of fun, especially with the counselors. The counselors who teach are really good; they know what they're talking about—I hope. We have a counselors' talent night and a campers' talent night; they're as fun and hilarious as anything you can imagine. I don't know how Mrs. Schilling (she's the camp director) does it. She must either be made of steel, magic, or both. I think the latter is most likely. There are four more days of camp; I want to see Mom and Dad, but I wish camp would never end. There's a museum here, too. Whoever keeps it in such good condition must have six hands, three brains, and rocket speed, to say nothing of patience. I can't stress how good, fun, helpful and understanding the counselors are. There's a canteen here, too. You could get anything you could possibly want there—well, almost anything. The guys there are nice, too. They run around like chipmunks all day and are still much nicer than most any store clerk you could find. Everyone's just great here. I wish you could come. You would love it; even if you did have Ranger Garbage.

Your friend (I hope),
Randy Darnton, 1967 4th Session Camper

Hunter Bags Bobcat

Newport News *Daily Press* photo by Smithfield

Last December James Cofield, left, killed this 37 pound bobcat as it crouched in a tree about 30 feet in the air on the John T. Butler farm in Isle of Wight County. Standing with him is John Butler, son of the farm owner. The youths were squirrel hunting when Cofield bagged this predator, a rarity in Virginia.

Bloodworms for Bream

A one-pound sunfish will earn you a citation, but Buddy McWhirt, age nine, of 810 Washington Avenue, Fredericksburg, didn't stop there. Last summer he took a bream from a Spotsylvania County pond, weighing exactly two pounds. Buddy was using bloodworms, a bait most often associated with saltwater fishing. He has convinced me; I'm going to try bloodworms for bream.

—*Joseph Vance*, "Mostly Fishing"
Free Lance-Star, Fredericksburg

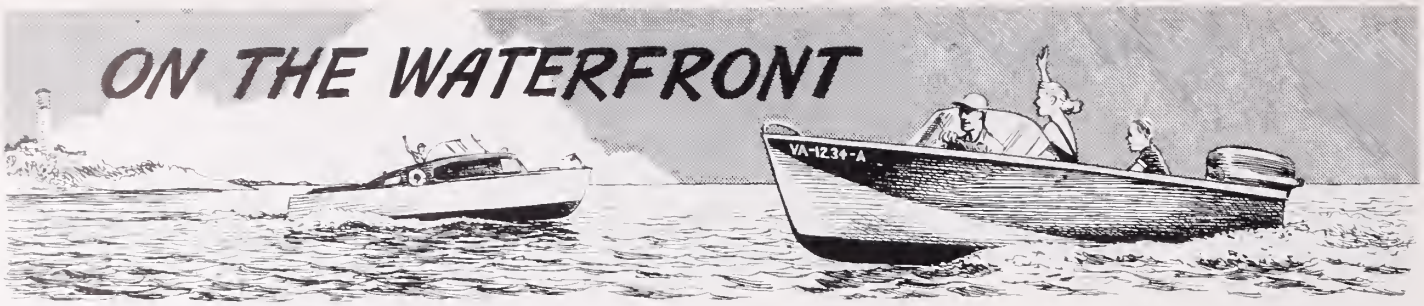
Game and Fish Club Rewards "Patch" Contestants

1967 wildlife food patch awards, presented last October by the Big Walker Game and Fish Club of Wythe County to area high school participants, went to the following youths: *1st prize* ($20), Landon Safewright; *2nd* ($12), Jerry Blessing; *3rd* ($8), Mike Simmerman. Landon and Mike are students at George Wythe High School; Jerry attends Rural Retreat. Final judging was done by State Game Wardens R. M. Wolfenden, Jr., and Robert Mitchell, and by Game Manager Virgil Boone.

Success

Twenty-two month old Raymond V. Corning, Jr., of Walkerton, brings in one of 10 redbreast sunfish taken last November on a Mattaponi River fishing excursion. His creel also included a channel cat. Next trip the youngster made good use of his life preserver. When Ray leaned far over the side of the boat his father, a Game Commission Supervising Fish Biologist, reached for him. Uneven weight distribution flipped the flatbottom canoe over and both Ray's went into the water. The unexpected dunking, however, didn't dampen this angler's enthusiasm for his sport.

Photos by Corning



Edited by JIM KERRICK

Docking

There are many common elements involved in docking, tying up to a mooring site or coming alongside another vessel.

The most common mistake is approaching too fast. A slight mistake in judgment can result in damage to your boat, the docking area or another boat. It is a good idea when you are approaching the docking or mooring area to come to a complete stop three or four boat lengths away and take into consideration the direction of the wind and current. Approach at slow speed and remember that at slow speed you must increase the rudder angle due to the fact that the rudder decreases with the speed of your boat. There is another important factor you should remember when handling your boat. It does not react like your car when you turn the steering wheel. When you turn the wheel on your boat you put the rudder over, causing the *stern* of the boat to swing, not the bow.

It is a good idea to approach the dock at a thirty degree angle at slow speed, using only enough power to maintain steerage way. As you approach the dock or landing, turn slowly until you are headed parallel to the mooring site. Back down just enough to check your forward motion, then secure your lines to the dock. Do not allow the loose end of your line to dangle into the water close to the propeller. It could catch in the propeller, and pull the boat against the dock, causing damage, or possibly throwing one of the occupants overboard or down in the boat.

Remember you are responsible for the damage caused by the wake from your boat. Exercise caution at all times when approaching another boat whether it is moored or underway.

Disaster Alert System

Boatmen in Virginia will soon benefit by the Disaster Alert System to provide for the rapid and widespread dissemination of public warning to communities in the path of approaching storms.

Boat Equipment

Boating equipment can be separated into three basic categories—required equipment, recommended equipment and desired equipment. The list of equipment required by the Virginia Boating Safety Act varies with each class of boat.

All vessels propelled by machinery must have a Coast Guard-approved life-saving device on board for each person.

Class "A" boats, less than 16 feet in length, must display at night a 20 point combination red and green light visible at one mile and a white, all-around, 32-point light, visible at two miles. A fire extinguisher is required if the boat has a closed compartment where gas fumes can accumulate. With an inboard engine a flame arrestor is required.

Class "1" boats, 16 feet to less than 26 feet, have the same lights and fire extinguisher requirements as class "A" boats. In addition, an efficient whistle or other sound-producing mechanical appliance is required.

Class "2" boats, 26 feet to less than 40 feet, and class "3" boats, 40 feet to less than 65 feet, require a 32-point, all-around white light visible for two miles, 10-point, separate red and green sidelights visible for one mile, and 20-point white light visible for two miles. A sounding device audible for one mile, either hand or power operated, is required on a class "2" boat. A class "3" boat must have a *power* sounding device. A bell that will produce a clear note is required on both class "2" and "3" boats.

Anchor lights are required if the vessel is anchored other than in a special anchorage area. The anchor light is a 32-point white light forward.

On the recommended list are such things as an anchor, line, paddle, oars, flares, bilge pump or bailing device, boat hook, flashlight, first aid kits, extra propeller, spare parts, tools and extra fuel. Just as important as having this equipment on board is having it readily accessible.

Desired equipment is equipment to make your boat more comfortable and boating more fun. The list of accessories varies with each individual pleasure boater; so before choosing, determine which items will give you the most enjoyment and be most valuable to insure your boating pleasure. But get the *required* items *first!*

An important difference exists between the fire-fighting equipment requirements for class "2" and class "3" boats. Generally speaking, without a fixed fire fighting system, class "2" boats require two approved fire extinguishers and class "3" boats require three. A fixed system substitutes for one of the required extinguishers on either class, and in some cases one large capacity approved extinguisher may be carried in lieu of two of the smaller approved types. Detailed information is available from the Commission of Game and Inland Fisheries and the U. S. Coast Guard.

Photo courtesy Evinrude Motors

Trout Stocking

(Continued from page 6)

	Period Stocked		
	Preseason	May	June
BLAND CO.			
Wolf Creek	R,BR	R,BR	R
Laurel Creek	B,R		
No Business Creek	B,R	B,R	
Lick Creek	B,R	B,R	R
Laurel Fork	B,R	B,R	R
Lick Creek*	R	R	R
BOTETOURT CO.			
Jennings Creek	B,R	R	R,BR
Mill Creek	B,R	R	R
Roaring Run	B,R	R	R
North Creek*	R	R	R
Middle Creek*	R	R	R
McFalls Creek*	R	R	R
Cornelius Creek*	R	R	R
Hypes Creek*	B		
Stony Run*	B		
Catawba Creek*	R	R	

Commission photo by Kesteloo

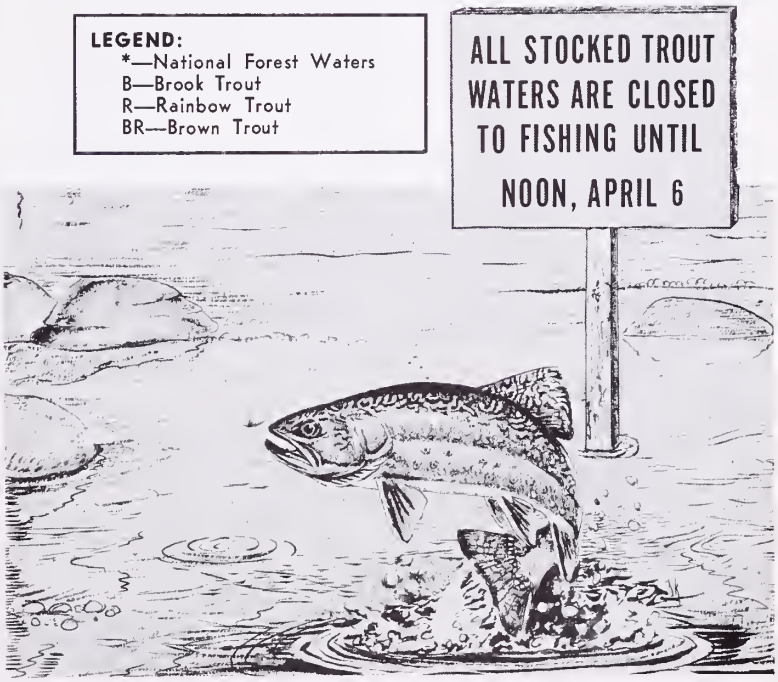
Brown trout.

BUCHANAN CO.			
Slate Creek	B,R	B,R	
Hurricane Fork	B,R	B,R	
CARROLL CO.			
Stuarts Creek	R	R	
Big Reed Island Creek	R	R	R
Little Reed Island Creek	R,BR	R,BR	R
Crooked Creek	B,R	R,BR	R
Burkes Creek	R	R	R
Coal Creek	B,R	B,R	R
CRAIG CO.			
John Creek	B,R	R,BR	
Potts Creek	R	R,BR	R,BR
Sinking Creek	B,R	R,BR	R,BR
Barbours Creek*	R	R	R
North Fork Barbours Creek*	R	R	
South Fork Barbours Creek*	R	R	
Cove Creek*	B		
Lipes Creek*	B		
McAffee Creek*	B		
DICKENSON CO.			
Frying Pan Creek	B,R		
Caney Creek	R	R	
FLOYD CO.			
Beaver Creek	B,R	B	
Burkes Fork	B,R	B,R	
Howells Creek	B,R	B,R	R
Indian Creek	R	R	
Rush Fork	R		
West Fork Little River	R,BR	R,BR	R
Meadow Creek	R		
Laurel Fork	B,R		
Mira Fork	B		
Little River	R	R	R
FRANKLIN CO.			
Green Creek	B,R	B,R	
Maggodee Creek	B,R	B,R	
Runnett Bag Creek	B,R	B,R	
Blackwater River	B,R	B,R	

	Period Stocked		
	Preseason	May	June
FREDERICK CO.			
Back Creek (Upper)	B,R	B,R	
Back Creek (½ mi. above #522 to ½ mi. below #600)	R,BR	R,BR	
Hogue Creek	B,R	R,BR	
Cedar Creek	B,R,BR	R,BR	R,BR
Paddy Run (Forest Line to #600)	B,R	B,R	
Paddy Run*	R	R	
GILES CO.			
Big Stony Creek	B,R,BR	B,R,BR	R,BR
Dismal Creek*	R	R	R
GREENE CO.			
Ivy Branch	B,R	B,R	
South River	B,R	B,R	
Swift Run	B,R	B,R	
GRAYSON CO.			
Big Wilson Creek	R	R	R
Middle Fork Helton Creek	B	B	R
Big Fox (lower 4 mi.)	R,BR		
Big Fox (upper 4 mi.)	R,BR	R,BR	R
Middle Fox Creek	R	R	R
Elk Creek	R,BR	R	R
Peach Bottom Creek	B,R	B	R
Helton Creek	B,R	B	R
Turkey Knob Fork Creek	B,R	B	
Hale Lake*	R	R	R
HENRY CO.			
Smith River	B,R	R,BR	R,BR
HIGHLAND CO.			
Bullpasture River	B,R,BR	R,BR	R,BR
Crab Run	B,R	B,R	R
S. F. Potomac River	B,R	B,R	
Laurel Fork	B,R	B,R	
Jackson River	B,R,BR	B,R,BR	R,BR
Benson Run*	B	B	
Laurel Fork*	B	B	
LEE CO.			
Hardy Creek	B,R,BR	R,BR	R
Dry Creek	R	R	R
Martins Creek	B,R	B,R	
North Fork Powell River	B,R		
MADISON CO.			
Garth Run	B,R	B,R	R
Hughes River	B,R	B,R	R
Rapidan River (fish-for-fun stream)	R		
Robinson River	B,R	B,R	
Rose River	B,R	B,R	
MONTGOMERY CO.			
Brush Creek	B,R	R	
Tom's Creek	R	R	
South Fork Roanoke River	R	R,BR	R
Poverty Creek*	R	R	
Craig Creek*	R	R	

(Continued on next page)

LEGEND:
*—National Forest Waters
B—Brook Trout
R—Rainbow Trout
BR—Brown Trout



Trout Stocking (Continued)

	Period Stocked		
	Preseason	May	June
NELSON CO.			
Tye River	R	R,BR	R,BR
North Fork Tye River	R	R,BR	R,BR
Stony Creek	B,R	B,R	R
Rockfish River	B,R	B,R	
PAGE CO.			
East Fork Hawksbill Creek	B,R	R	
Hawksbill Creek	B,R	B,R	
Cub Run*	B,R	B,R	
Pitt Spring Run*	B,R	B,R	
Brown Run*	B		
PATRICK CO.			
Dan River (below Powerhouse)	R	R,BR	R
Dan River (above Powerhouse)	B,R	B,R	
Rock Castle Creek	B,R	B,R	
Round Meadow Creek	B,R	B,R	
North Fork Mayo Creek	B,R	B,R	
South Fork Mayo Creek	B,R	B,R	
Poorhouse Creek	B,R		
Big Ivy Creek	B,R	B,R	
Ararat River	B,R		
PULASKI CO.			
Big Laurel Creek	B,R	B,R	
West Fork Peak Creek	B,R	B	
Tract Fork*	R		
RAPPAHANNOCK CO.			
Piney Branch	B,R	B,R	
Rush River	B,R	B,R	
North Fork Thornton River	B,R	B,R	
ROANOKE CO.			
Roanoke River	B,R,BR	B,R,BR	
Tinker Creek	B,R	B,R	
ROCKBRIDGE CO.			
Mill Creek	B,R	B,R	
Irish Creek	B,R	B,R	R
South River	B,R	B,R,BR	R,BR
Hayse Creek	B,R	B,R,BR	
Cedar Creek	B,R,BR	B,R,BR	R
Mill Creek	B,R,BR	B,R,BR	
Laurel Run*	R		
Little Stony (above Woodstock Reservoir)*	B,R	B,R	
Paddy Run*	B,R	B,R	
Cedar Creek*	B,R		
Mountain Run*	R	R	
Little Stony (below Woodstock Reservoir)*	R	R	
Little Passage Creek*	B,R		
Upper Passage Creek*	B,R	R	
Peters Mill Creek*	B,R	B,R	
Tomahawk Pond*	R		
SMYTH CO.			
S. Fork Holston River (gorge)	R	R	R
S. Fork Holston River (lower)	R,BR	R	R
Big Laurel Creek	R	R	R
Staleys Creek	B,R	B,R	R
Lick Creek	B,R	B,R	R
Middle Fork Holston River	B,R	B,R	R
Cregger Creek*	R	R	
Comers Creek*	R	R	R
Hurricane Creek*	R	R	
Cressy Creek*	R	R	
Houndshell Creek*	R	R	
Dickey's Branch*	R	R	
West Fork Nicks Creek*	R		
East Fork Nicks Creek*	R		
Rolands Creek*	R	R	
Candy Creek*	R	R	
Little Laurel Creek*		R	R
TAZEWELL CO.			
Wolf Creek	R	BR	R
Cove Creek	B,R	B,R	R
Laurel Creek	B,R	B,R	
Roaring Fork	B,R	B,R	R

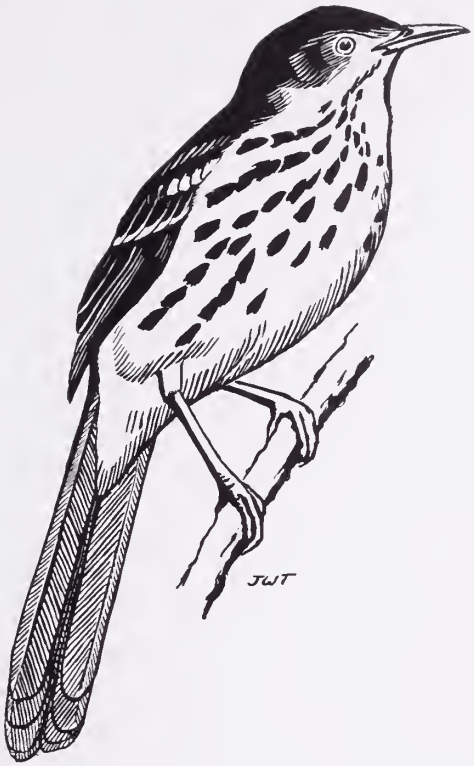
The prized and colorful golden variety of rainbow trout.

Commission photo by Kesteloo

	Period Stocked		
	Preseason	May	June
Big Mary's Creek*	B,R	B,R	
Bratton's Run*	B		
Elk Creek*	R	R	
ROCKINGHAM CO.			
North Fork Shenandoah River	B,R,BR	B,R,BR	
German River	B,R		
Dry River	B,R	B,R	
Briery Branch	B,R	B,R	
Silver Lake	R	R	R
Boones Run*	B,R	R	
Long Run*	B,R		
Shoemaker River*	R		
Blacks Run*	B,R	B,R	
Gum Run*	B	B	
Skidmore Fork*	B,R	B,R	
Union Springs Run*	B,R	B,R	
Slate Lick Run*	B		
RUSSELL CO.			
Big Cedar Creek	R,BR	R,BR	R
Big Cedar Creek (fish-for-fun)	R		
SCOTT CO			
Little Stony Creek	B,R	B	
Stock Creek	B,R	B	R
Cove Creek	B,R	B,R	
Big Stony Creek	B,R	R	
Devils Fork*	R	R	
Stony Creek*	R	R	R
Straight Fork*	R	R	R
Little Stony Creek*	R	R	R
Cove Creek*	R	R	R
SHENANDOAH CO.			
Passage Creek	B,R,BR	B,R,BR	R
Big Stony Creek (lower)	B,R	B,R	R
Laurel Run	B,R	B,R	
Big Stony Creek (Bayse)	B,R	B,R	
Little Tumbling Creek	B,R	B,R	R
Punch & Judy Creek*	R	R	
WARREN CO.			
Gooney Run	B,R	R,BR	
WASHINGTON CO.			
Whitetop Laurel	B,R,BR	R,BR	R
Tennessee Laurel	R	R	R
Green Cove Creek	R	R	R
Big Brumley Creek	B,R	B	R
Big Tumbling Creek	B,R	B,R	R
Valley Creek	B,R	B,R	R
WISE CO.			
S. Fork Powell River	B,R	B,R	
North Fork Pound River	R	R	R
Burns Creek*	R	R	
Clear Creek*	R	R	R
WYTHE CO.			
Cripple Creek	B,R,BR	R,BR	R
Francis Mill Creek*	R	R	
East Fork Stony Creek*	R	R	
East Fork Dry Run*	R	R	
West Fork Dry Run*	R	R	
Gullion Fork*	R		
West Fork Reed Creek*	R	R	
West Fork Peak Creek*	R	R	

Lakes Stocked By Virginia Commission of Game and Inland Fisheries

Smith Mountain Lake	Rainbow
Carvins Cove	Rainbow
Philpott Reservoir	Rainbow
Lake Flannagan	Rainbow
Scott-Wise Lake	Rainbow
Gatewood Reservoir	Rainbow
South Holston Reservoir	Rainbow



Bird of the Month:

Brown Thrasher

By DR. J. J. MURRAY
Lexington

LAST month's bird, the ruddy turnstone, nests so far to the north that few people have seen its eggs. The brown thrasher, on the other hand, might nest in almost any yard in Virginia where there is good shelter. The thrasher is not particularly shy, though it is suspicious. For its nest it likes the protection of a thick and preferably thorny bush. It will defend its nesting place with noise and vigor.

It should be easy to identify, but since both birds have brown backs and spotted breasts people not infrequently confuse the thrasher with the wood thrush. It is sometimes called "brown thrush." There is not much reason for this confusion, as the shape and actions of the two birds are so different. The wood thrush has large separate spots on its breast; the thrasher has streaks of connected spots. The iris of the thrasher's eye is yellow, while that of the wood thrush is dark. The thrasher's tail is very long.

The scientific name of the brown thrasher is *Toxostoma rufum*. The second part refers to the bright brown (rufous) color of the bird's back. The first part is from two Greek words meaning "bow-shaped mouth," or "curved bill."

In this species the sexes are alike. Above, the bird is rufous in color. The underparts are white, heavily streaked on the breast and sides with chains of dark reddish-brown spots. There are two narrow white wing bars. The male is 11 to 12 inches long; the female, somewhat smaller.

I have found many nests in Rockbridge County. They are bulky, made of sticks and leaves, lined with rootlets. This bird nests in a variety of positions, sometimes within two feet of the ground, rarely high. The highest I have found was 12 feet up, in a very unusual position, in a hollow in the trunk of an apple tree. A hawthorn bush is the favorite nesting place, but sometimes a pair will use a cedar or a honeysuckle tangle.

Usually 4 beautiful eggs are laid, sometimes 3, sometimes as many as 6. They are greenish-white, heavily spotted with reddish-brown. The degree of spotting varies. I remember finding a nest where two of the eggs were normal in color, one very heavily spotted, the fourth lightly dotted with small spots. Occasionally there will be a pale blue egg in a set. At Lexington the first eggs of the summer are laid from middle to late April. It takes 12 to 14 days for them to hatch.

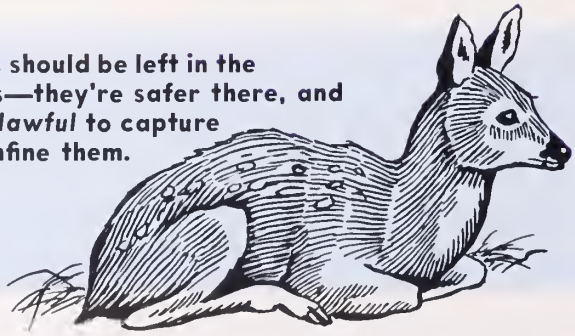
Opinions vary very much as to the quality of the song of this bird. I think it is lovely. There is no need to compare it to the songs of its relatives, the mockingbird and catbird. They are just different, although there is a family resemblance. Each is lovely. The thrasher usually doubles his phrases. He generally chooses as high a perch as he can find for his concert and sings at the top of his breath. Altogether, it is a brilliant performance. The bird also has a call-note that is a loud "smack."

It's Unlawful to keep

Wildlife in Captivity

Wildlife is the property of the State, and may be kept in personal possession only during established seasons, and then only when taken by lawful means. This applies to capturing and keeping alive as well as killing. It is illegal, therefore, to possess wild birds and game animals, *dead or alive*, except during authorized seasons, and in any event wildlife protected by closed seasons may not be kept in captivity. Species protected by closed seasons include bear, deer, fox, rabbit, squirrel, beaver, mink, muskrat, opossum, otter, raccoon, and all native wild birds except crows, buzzards and jays.

Bear cubs are frequently involved in illegal possession cases.



Fawns should be left in the woods—they're safer there, and it's *unlawful* to capture or confine them.

GRAY SQUIRREL

COTTONTAIL

RACCOON

Although game species, none of the above mammals may be legally kept in captivity.

JWT